## (19) World Intellectual Property Organization

International Bureau



# 1 (EEE) 8 (KINGED I) EEEKE 1801 8 (KIN 8 EEK) 8 EEKE 1811 1 II 18 EEEE 8 KIN 8 KEPE 8 KIN 8 EEKE 8 EEKE EERE K

#### (43) International Publication Date 14 April 2005 (14.04.2005)

#### **PCT**

### (10) International Publication Number WO 2005/032620 A1

(51) International Patent Classification7: A61M 1/10, 1/12

(21) International Application Number:

PCT/AU2004/001379

(22) International Filing Date: 8 October 2004 (08.10.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003905511

9 October 2003 (09.10.2003)

(71) Applicant (for all designated States except US): VEN-TRACOR LIMITED [AU/AU]; 126 Greville Street, Chatswood, NSW 2067 (AU).

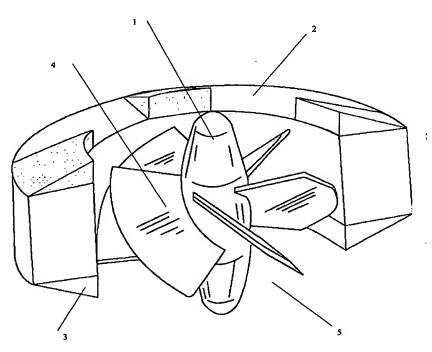
(72) Inventors; and

(75) Inventors/Applicants (for US only): TANSLEY, Geoffrey, Douglas [AU/AU]; 41 Sprigg Place, Mt Colah, NSW 2079 (AU). COOK, Martin, Christopher [AU/AU]; Unit 3, 65 Beam Street, Coogee, NSW 2034 (AU). WOODARD, John, Campbell [AU/AU]; 27 Wareemba Avenue, Thornleigh, NSW 2120 (AU).

- (74) Agent: HODGKINSON McINNES PAPPAS; Level 3, 20 Alfred Street, Milsons Point, NSW 2061 (AU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: IMPELLER



(57) Abstract: An axial flow rotary blood pump including an impeller (5) adapted to be magnetically rotated within a housing by the interaction of magnets disposed on or in the impeller and stators disposed on or in the housing. The impeller includes at least one support ring (2) supporting a plurality of blades (4), and a hydrodynamic bearing (3) that operates at least axially and radially in respect of an axis of rotation of the impeller (5).

## WO 2005/032620 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

#### Published:

with international search report